

## CLAIMS

1. An inter-router adjustment method comprising:

an information request step of requesting router status  
information to all router devices belonging to a same  
5 sub-network;

a step of acquiring the router status information and  
calculating priorities deciding a router device that is to  
become an operating status based on the router status  
information so that the plurality of router devices can operate  
10 virtually as one router device; and

a step of deciding a first router device that is to become  
an operating status and a second router device to be in a standby  
status, according to the priorities.

2. An inter-router adjustment method comprising:

15 an information request step of requesting router status  
information to all router devices belonging to a same  
sub-network;

a step of acquiring the router status information and  
calculating priorities for deciding a router device that is  
20 to become an operating status based on the router status  
information so that the plurality of router devices can operate  
virtually as one router device;

a step of transmitting the priorities calculated for the  
router devices respectively to the router devices; and

25 a step for a first router device which received the

priority to decide whether or not to become an operating status, depending upon the priority of its own and the priority of a second router device received from the second router device being in an operating status.

5           3. An inter-router adjustment method according to either claim 1 or claim 2, further including a step of adjusting the priorities between the router devices depending upon a significance of the router status information.

10           4. An inter-router adjustment method according to either claim 1 or claim 2, wherein request for the router status information is periodically made based on the information request step.

15           5. An inter-router adjustment method according to either claim 1 or claim 2, wherein request for the router status information is made according to a request from a communication device including the router devices connected to the same sub-network.

20           6. An inter-router adjustment method according to either claim 1 or claim 2, wherein calculating the priorities is made when there is a change in the router status information acquired.

25           7. An inter-router adjustment method according to either claim 1 or claim 2, wherein the router status information is at least any one of a line status, a processing burden and a battery remaining capacity of the router device itself.

8. A router priority calculation device comprising:

a router information gathering section for gathering router status information of router devices belonging to a same sub-network;

5 a priority calculating section for calculating priorities deciding a router device that is to become an operating status based on the router status information so that a plurality of router devices can operate virtually as one router device; and

10 a priority notifying section for notifying the priorities calculated for the router devices respectively to the router devices.

9. A router priority calculation device comprising:

15 a router information gathering section for gathering router status information of the router devices belonging to a same sub-network;

a priority calculating section for calculating priorities deciding a router device that is to become an operating status based on the router status information so that  
20 a plurality of router devices can operate virtually as one router device;

a master deciding section for deciding a first router device that is to become an operating status and a second router device that is to be in a standby status, according to the  
25 priorities; and

a master notifying section for notifying information identifying the decided router device to the router device.

10. A router priority calculation device according to either claim 8 or claim 9, wherein the router information gathering section has a comparing section for comparing the router status information newly acquired with existing router status information, to instruct the priority calculating section to re-calculate a priority when the comparing section detects a difference in the router status information.

11. A router priority calculation device according to either claim 8 or claim 9, wherein the router information gathering section has an information request section for requesting the router status information to the router device.

12. A router priority calculation device according to claim 11, wherein the router information gathering section has a timer, the information request section requesting the router status information when receiving a time-up notification from the timer.

13. A router priority calculation device according to claim 11, wherein the router information gathering section further includes an update request receiving section for receiving an update request for the priority from a communication device including the router devices connected to the same sub-network,

the update request receiving section, when receiving the

update request, making a notification to the information request section whereby the information request section requests the router status information to the router device.

14. A router priority calculation device according to  
5 either claim 8 or claim 9, wherein the router status information is at least any one of a line status, a processing burden and a battery remaining capacity of the router device itself.

15. A router device comprising:

a status notifying section for forwarding router status  
10 information comprising at least any one of a line status, a process burden and a battery remaining capacity;

a priority receiving section for receiving a priority deciding a router device that is to become an operating status so that a plurality of router devices belonging to a same  
15 sub-network can operate virtually as one router device; and

a master deciding section for deciding whether to become an operating status or a standby status, according to the priority received and a priority notified from a first router device in an operating status.

20 16. A router device according to claim 15, wherein the status notifying section forwards periodically the router status information onto the sub-network.

17. A router device according to claim 15, further including an information request receiving section for  
25 receiving a request for the router status information, to

forward the router status information onto the sub-network depending upon the request the status notifying section received.

18. A router device according to claim 15, further-  
5 including a status monitor section for monitoring a change in the router status information, the status monitor section, when detecting a change in the router status information, making a notification to the information notifying section whereby the information notifying section forwards a latest  
10 router status information onto the sub-network.

19. A local network system comprising a router device according to any one of claims 15 to 18, and a router priority calculation device according to any one of claims 8 to 13.